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EXAMINER

AGUSTIN, PETER VINCENT

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/040,177	Applicant(s) IMAMURA ET AL.	
	Examiner Peter Vincent Agustin	Art Unit 2652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because on the last line, "read-out" should be --lead-out--.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyata (US 6,052,347) in view of Lee et al. (hereafter Lee) (US 6,404,712).

Miyata discloses a laser output circuit for an optical disk recording apparatus (figures 11 & 12) in which an optical disk (1) is rotated at a constant angular speed (column 2, lines 19-22) and a signal is recorded while the disk is rotated, said laser output circuit comprising: a pickup control circuit (37) for controlling a pickup (35) position at which data is written onto the optical disk; a signal recording circuit (43) for supplying to said pickup data to be written onto said optical disk; a signal level detection circuit (41) for detecting a signal level of the signal read by said pickup; and a laser output setting circuit (45 & 47) for setting a laser output for the writing of data onto the optical disk by said pickup, wherein test data is written onto a trial writing region (figure 6, element 11) on an inner peripheral side of said optical disk and onto an outer peripheral region (15) outside a data writing region (13), the thus written test data is read from the disk, and said laser output is set in accordance with the signal levels of the test data read from both the trial writing region and the outer peripheral region (column 6, lines 18-29); wherein said

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trial writing region (11), a program region (13), and an outer peripheral region (15) are disposed in order from the inner peripheral side of said optical disk toward the outer peripheral side; and wherein test data is written onto or read from the trial writing region disposed on the innermost peripheral side of said optical disk (column 6, lines 18-29). Miyata, however, does not explicitly disclose the presence of a buffer region, a lead-in region, and a lead-out region. Due to this deficiency, it follows that Miyata also does not explicitly disclose the claimed “said outer peripheral region is disposed outside the lead-out region” and the claimed “the trial writing region disposed outside of the lead-out region”, since the claimed “lead-out region” is not explicitly disclosed.

Lee discloses in figure 4 a trial writing region (PCA), a buffer region (PMA), a lead-in region (lead-in area), a program region (program area), and a lead-out region (lead-out area) disposed in order from the inner peripheral side toward the outer peripheral side. Lee discloses that this arrangement is used for detecting the optimal writing power (see column 3, lines 54-55). It should be noted that the claimed “outer peripheral region” corresponds to any region on an outer diameter of the disk of Lee, e.g., an unlabeled area to the right of the “lead-out area” of figure 4. It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to have added the trial, buffer, lead-in, program, and lead-out regions, and the outer peripheral region disposed outside the lead-out region of Lee to the disk of Miyata, the motivation being to provide a more accurate test-writing, thereby detecting optimal writing power.

The combination of Miyata and Lee will inherently result in a disk having multiple trial writing regions and a lead-out region. However, this combination would be silent in regard to the

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arrangement of these regions, i.e., Miyata in view of Lee do not explicitly disclose the claimed “the trial writing region disposed **outside** of the lead-out region” (the term outside being interpreted as a direction proceeding towards an outer circumference). Note that the trial writing region would either be disposed inside or outside the lead-out region. However, it would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to have arranged the trial writing region of Miyata in view of Lee outside the lead-out region as claimed because either arrangement would have been obvious variants and the applicant’s invention would have been expected to perform equally well with either arrangement of the trial writing region and the lead-out region, see MPEP 2144.03 [R-1] section VI – C. Rearrangement of Parts.

4. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyata & Lee as applied to claim 1 above, and further in view of Den Boef (US 6,134,209).

For a description of Miyata & Lee, see the rejection above. Furthermore, in regard to claim 3, Miyata discloses that the laser output setting circuit sets the laser output based on an inner peripheral side laser output (figure 13, step 63) set according to the test data read from the trial writing region, an outer peripheral side laser output set according to the test data read from the outer peripheral region (figure 13, step 67) (see also column 8, line 62 thru column 9, line 12). Furthermore, in regard to claim 4, Miyata discloses that said test data is written by altering the laser output within a predetermined range (column 6, lines 18-40). Miyata, however, does not disclose setting the laser output based on an information on a recording property of the disk (claim 3), where said recording property is determined from the test data based on a relationship between the laser output and the signal level of the signal read by said pickup (claim 4), and

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prerecorded data regarding a recording property of the disk is read from the disk, and said recording property is determined based on the read data (claim 5).

Den Boef discloses setting a laser output based on information on a recording property of a disk (column 2, lines 35-48), wherein said recording property is determined from test data based on a relationship between the laser output and the signal level of a signal read by a pickup (column 1, lines 56-59), and wherein prerecorded data regarding a recording property of the disk is read from the disk, and said recording property is determined based on the read data (column 1, lines 56-59). It would have been obvious to one of ordinary skill in the art at the time of invention by the applicant to have set the laser output of Miyata & Lee based on the recording property of a disk as suggested by Den Boef, the motivation being to provide a reliable method for setting the optimum write power depending on read signals from test patterns written on a medium and being less affected by noise (see column 1, lines 56-59).

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyata & Lee as applied to claim 1 above, and further in view of Horiguchi (US 5,321,679).

For a description of Miyata & Lee, see the rejection above. However, in regard to claim 6, Miyata & Lee are silent to whether an inner peripheral side laser output set from the test data read from the trial writing region, and an outer peripheral side laser output set from the test data read from the outer peripheral region are stored in a memory.

Horiguchi discloses storing a laser output power in a memory (see abstract lines 8-11). It would have been obvious to one of ordinary skill in the art at the time of invention by the applicant to have stored the inner and outer peripheral side laser outputs of Miyata & Lee to the

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memory of Horiguchi, the motivation being to obtain optimum operational conditions even when the optical pickup unit is exchanged (see abstract lines 4-6).

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyata, Lee & Horiguchi as applied to claim 6 above, and further in view of Inaba (JP 58164059 A).

For a description of Miyata, Lee & Horiguchi, see the rejection above. However, it is not disclosed that the inner peripheral side laser output set according to the test data read from the trial writing region and the outer peripheral side laser output set according to the test data read from the outer peripheral region are deleted from the memory when the disk is replaced.

Inaba discloses (see abstract) clearing the content of a memory when a disk is replaced (whenever a door is opened) in order to free unnecessary data from memory and to obtain sufficient memory space. It would have been obvious to one of ordinary skill in the art at the time of invention by the applicant to have deleted the inner and outer peripheral side laser outputs of Miyata, Lee & Horiguchi from the memory when the disk is replaced, as suggested by Inaba. The motivation would have been to free unnecessary data from memory and to obtain sufficient memory space.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyata, Lee & Horiguchi as applied to claim 6 above, and further in view of Toyooka et al. (hereafter Toyooka) (US 4,788,672).

For a description of Miyata, Lee & Horiguchi, see the rejection above. However, it is not disclosed that the inner peripheral side laser output set according to the test data read from the trial writing region and the outer peripheral side laser output set according to the test data read

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from the outer peripheral region are deleted from the memory when a predetermined time elapses after the end of a recording operation.

Toyooka discloses (see abstract) erasing unnecessary data during a period of time when the optical disc memory is not accessed, in order to free unnecessary data from memory and to obtain sufficient memory space. It would have been obvious to one of ordinary skill in the art at the time of invention by the applicant to have deleted the inner and outer peripheral side laser outputs of Miyata, Lee & Horiguchi from the memory when a predetermined time elapses, as suggested by Toyooka. The motivation would have been to free unnecessary data from memory and obtain sufficient memory space.

Response to Arguments

8. Applicant's arguments filed January 31, 2005 have been fully considered but they are not persuasive.

a. In regard to claim 1, the Applicant argues on page 6, third paragraph that none of the cited references disclose or suggest the feature of claim 1 as amended, i.e., the recitation "wherein test data is written onto or read from the trial writing region disposed on the innermost peripheral side of said optical disk and the trial writing region disposed outside of the lead-out region". As noted by the Examiner on the previous Office Action, the Examiner acknowledges that since the claimed "lead-out region" is not explicitly disclosed, it follows that Miyata also does not explicitly disclose the claimed "said outer peripheral region is disposed outside the lead-out region" and the claimed "the trial writing region disposed outside of the lead-out region".

The Examiner relies on supporting reference to Lee to show the missing features such as the

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lead-out region and the outer peripheral region. Therefore, in combination with the Lee reference, it is considered that these limitations are rendered obvious.

b. Further, in regard to claim 1, the Applicant argues on page 6, third paragraph that the references could not be combined to render the claimed feature "wherein test data is written onto or read from the trial writing region disposed on the innermost peripheral side of said optical disk and the trial writing region disposed outside of the lead-out region" obvious. The Examiner disagrees for the reasons noted on items 3 and 8a above.


Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Vincent Agustin whose telephone number is 571-272-7567. The examiner can normally be reached on Monday-Friday 9:30-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Peter Vincent Agustin
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PRIMARY EXAMINER AU 2652